

γ Tubulin (B-12): sc-271845

BACKGROUND

Tubulin is a major cytoskeleton component that has five distinct forms, designated α , β , γ , δ and ϵ Tubulin. α and β Tubulins form heterodimers which multimerize to form a microtubule filament. Multiple β Tubulin isoforms ($\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, $\beta 5$, $\beta 6$ and $\beta 8$) have been characterized and are expressed in mammalian tissues. $\beta 1$ and $\beta 4$ are present throughout the cytosol, $\beta 2$ is present in the nuclei and nucleoplasm, and $\beta 3$ is a neuron-specific cytoskeletal protein. γ Tubulin forms the gammaosome, which is required for nucleating microtubule filaments at the centrosome. Both δ Tubulin and ϵ Tubulin are associated with the centrosome. δ Tubulin is a homolog of the *Chlamydomonas* δ Tubulin Uni3 and is found in association with the centrioles, whereas ϵ Tubulin localizes to the pericentriolar material. ϵ Tubulin exhibits a cell cycle-specific pattern of localization; first associating with only the older of the centrosomes in a newly duplicated pair, and later associating with both centrosomes.

CHROMOSOMAL LOCATION

Genetic locus: TUBG1/TUBG2 (human) mapping to 17q21.2; Tubg1/Tubg2 (mouse) mapping to 11 D.

SOURCE

γ Tubulin (B-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 427-451 at the C-terminus of γ Tubulin of human origin.

PRODUCT

Each vial contains 200 μ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271845 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

γ Tubulin (B-12) is recommended for detection of γ Tubulin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

γ Tubulin (B-12) is also recommended for detection of γ Tubulin in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for γ Tubulin siRNA (h): sc-29322, γ Tubulin siRNA (m): sc-29323, γ Tubulin shRNA Plasmid (h): sc-29322-SH, γ Tubulin shRNA Plasmid (m): sc-29323-SH, γ Tubulin shRNA (h) Lentiviral Particles: sc-29322-V and γ Tubulin shRNA (m) Lentiviral Particles: sc-29323-V.

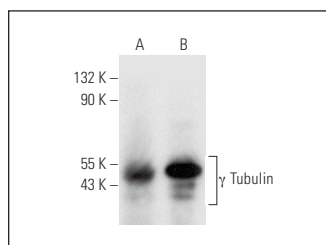
Molecular Weight of γ Tubulin: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or K-562 whole cell lysate: sc-2203.

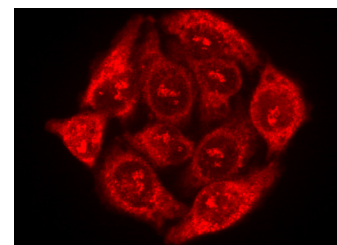
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



γ Tubulin (B-12): sc-271845. Western blot analysis of γ Tubulin expression in A-431 (A) and HeLa (B) whole cell lysates.



γ Tubulin (B-12): sc-271845. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Chen, Y., et al. 2011. A conserved motif within RAP1 has diversified roles in telomere protection and regulation in different organisms. *Nat. Struct. Mol. Biol.* 18: 213-221.
- Bonhoure, N., et al. 2020. MAF1 is a chronic repressor of RNA polymerase III transcription in the mouse. *Sci. Rep.* 10: 11956.
- Imamura, I., et al. 2024. Potential involvement of KANK1 haploinsufficiency in centrosome aberrations. *Biochim. Biophys. Acta Gen. Subj.* 1868: 130648.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See γ **Tubulin (C-11): sc-17787** for γ Tubulin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.